SENNHEISER
The Pursuit of Perfect Sound

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For decades now, Sennheiser has been the go-to audio specialist for major sports broadcasts. Sennheiser's professional audio solutions are the perfect team players right on the field or in the studio. Offering spectators a perfect sports experience is a goal Sennheiser shares with major television studios: The more complex and larger the sporting event, the higher the requirements are for reliable, interference-free HD audio transmission. Transmission systems from Sennheiser have become a favorite of fans and on-site sound engineers alike. When it comes to flexibility and durability, they've always been pure Champions League material.

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ESFERA
5.1 Surround Microphone System

“The fans’ cheering is part of the game.”

ESFERA brings the excitement in the stadium straight to viewers’ houses and allows 5.1 surround sound without complicated microphone installations, using just two channels. The system’s microphones offer all the features of Sennheiser’s popular MKH line, and the 19" processor unit converts the stereo signal into a full 5.1 signal—at any point in the production process, in real time or during post-production. This makes ESFERA ideal for integration into existing workflows. ESFERA has many possible areas of application. Wireless broadcast cameras benefit from the fact that ESFERA only occupies two of the usual four audio inputs. Suspended from the ceiling of the arena, the innovative surround microphone system also ensures that the cheering fans become part of the game.

SPB 8000.
The Processing Unit.

The 19" processing unit uses the microphone signals to generate a full 5.1 surround signal with sampling rates of up to 96 kHz. An integrated compressor ensures a broadcast-friendly signal. The SPB 8000 also features a clear, minimalist design with four presets for direct selection, which can be modified as needed using the Ethernet interface. The processor's software allows you to define your own surround sound settings. The SPB 8000 offers highly flexible, clear signal routing: the input side is fitted with two analogue XLR-3 sockets with P48 phantom powering and two digital inputs for an AES3 signal. On the output side, the unit has six digital outputs (left, right, centre, LFE, surround left, surround right) for three AES3 signals.

SPM 8000.
The Stereo Microphone.

Surprisingly small and powerful: ESFERA's two radio-frequency condenser microphones in an X-Y arrangement offer natural, detailed sound along with high weathering resistance and durability. The outdoor microphone unit comes as a complete package with a wind-shield basket and shock mount. Sports broadcasters value its low inherent noise, which allows even the finest acoustic details to be captured. This means the excitement in the arena makes it straight to the screens in viewers' homes.

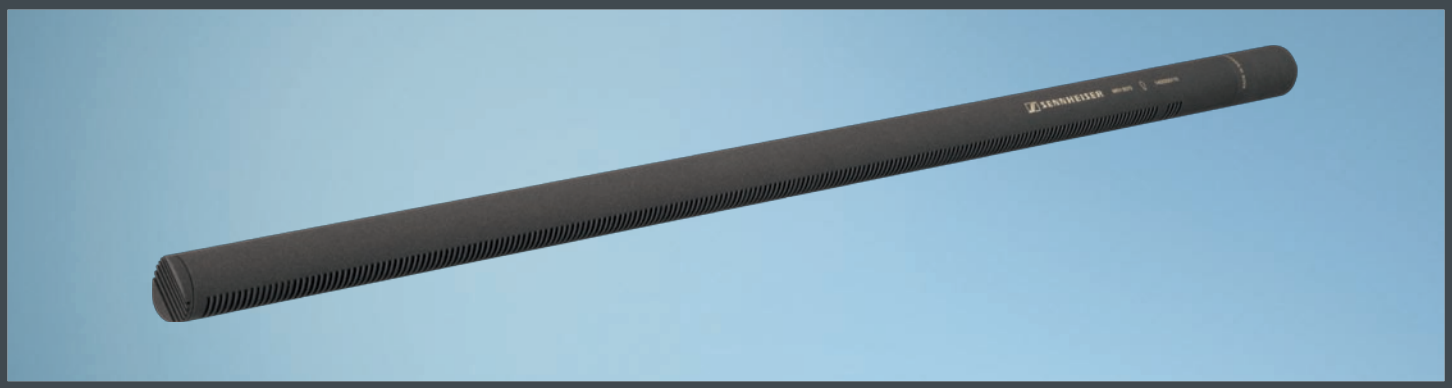
MKH Serie
The Team Players

“On the field, there’s nothing more important than team play.”

When it comes to capturing the right moment, professional recording microphones are the key to victory. For over 30 years, Sennheiser’s MKH series has been using an RF principle to constantly set new standards where it counts. The series features very low inherent noise and is resistant to harsh climactic and weather conditions.

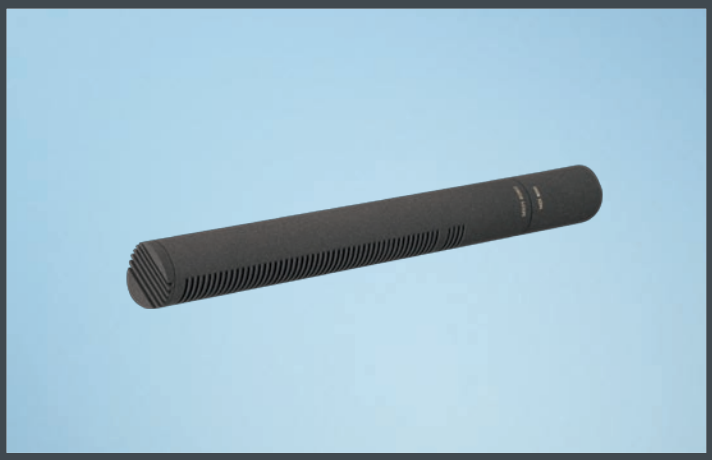
MKH 8070.
Right on the Playing Field: The Long Shotgun Microphone

The MKH 8070 long shotgun microphone is entirely designed for high-quality recording of far-off sound sources, making it ideal for positioning at the edge of playing fields. Its extreme directivity and lobar pick-up pattern enable it to reliably capture distance noises and events even under extremely difficult acoustic conditions. Lateral interference noise is suppressed without distortion. Just combine the MKH 8070 with the MZD 8000 digital module and use it as a full-scale digital microphone.



MKH 8060.
For Interviews: The Short Shotgun Microphone

Whether for outdoor recording or studio productions, the MKH 8060 provides optimal sound quality to go with high-quality images. For professional use, this shotgun microphone offers compact dimensions and an extraordinarily natural sound with excellent off-axis linearity. Lateral interference noise is suppressed without distortion. Just combine the MKH 8060 with the MZD 8000 digital module and use it as a full-scale digital microphone.



MKH 416 and MKH 418 S.
The Classics.

MKH 416 and MKH 418 S have been reliable team players in broadcast for decades and are still state-of-the-art when it comes to superior sound and robustness.

Broadcast Headsets and Headphones

“Team play is all about perfect communication.”

Whether in production, in the OB van or for mobile applications: Clear communication is the key to a successful sporting event. Sennheiser has continuously cooperated with experts from major television and radio stations to improve its headsets.

The new generation of professional broadcast headsets offers optimal speech intelligibility and comfortable wear—even when the game goes into overtime.

Headphones

HD 26 PRO.

The professional headphones with particularly accurate, linear sound reproduction.

The closed design and ability to generate particularly high SPLs make the HD 26 PRO ideal for outdoor broadcasts. Its soft ear pads and light weight ensure first-class comfort, even during long productions. The HD 26 PRO is equipped with the ActiveGard™ system to protect wearers’ hearing from volume peaks of up to 105 dB. This feature can be activated using a switch. The HD 26 PRO is based on the modular concept, meaning that the head-band padding and ear pads, as well as the cable, can easily be replaced.

HD 280 PRO.

Professional Monitoring Headphones.

The HD 280 PRO dynamic, around-the-ear stereo headphones with a closed design effectively keep out ambient noise. That makes these robust headphones ideal for use in loud surroundings, e.g. outdoor monitoring.

Headsets

HMD 26-II.
The Dynamic Broadcast Headset.

Featuring a dynamic microphone and supra-aural headphones, and easy to wear for long periods, the HMD 26-II is the new standard for broadcasting. The microphone has a vibration-reducing capsule mounting system to absorb as much impact noise as possible. The short flexible boom guarantees correct microphone positioning. The headphones are designed for a high characteristic SPL. The ActiveGard™ Limiter protects against volume peaks of over 105 dB and can be switched on and off. The swiveling headphone system allows single-sided listening to the environment as needed.

HME 26-II.
Broadcast Headset with Condenser Microphone.

The HME 26-II ensures full concentration in the OB van. Its high-quality condenser microphone (available with an omni-directional or a cardioid pick-up pattern) delivers crystal-clear, accurate sound reproduction in optimal transmission quality with a very linear frequency response and high feedback suppression. The closed, supra-aural headphones generate a high characteristic SPL with effective passive noise attenuation, and come equipped with the ActiveGard™ Limiter, which can be activated as needed.

HMDC 26-II.
A Secure Investment: The High-performance Headset to Meet Any Requirements.

The advantages of the HMDC 26-II premium headset are particularly apparent in noisy environments. Its dynamic microphone offers an excellent acoustic performance with extremely low impact noise transmission, and can be worn on both sides. The short, flexible microphone boom ensures that the microphone is positioned properly. The closed, supra-aural headphones with a very high characteristic SPL and good passive noise attenuation come equipped with the NoiseGard™ technology that enables active noise compensation of up to 90%. Peak level protection always protects your hearing from extreme volume peaks of over 110 dB.

HMD 280 PRO.
Broadcast Headset with a Dynamic Microphone.

The HMD 280 PRO is suitable for professional use during live presenting and reporting, as well as talkback purposes. The headset consists of closed, around-the-ear headphones based on the HD 280 PRO, as well as a dynamic microphone with a super-cardioid pattern and particularly low impact noise.

Professional Wireless Systems

“When it comes to being fast and reliable, I need to be able to move with absolute freedom.”

Sennheiser’s professional wireless systems offer broadcasters the world over not only versatility and flexible use, but also the certainty that they can rely completely on their audio system when using a complex broadcasting concept for playing on a number of channels. The transmission is reliable and interference-free, with the kind of detailed, natural sound you can only expect from Sennheiser. This is true of both multichannel systems and mobile ENG sets.

Digital 9000

The Wireless Masterpiece for Studios.

The best in its class has gone digital. Sennheiser presents the new Digital 9000 system, the standard solution of the future for the most demanding live applications, including multichannel broadcasting and stage productions. In these areas of application, sound technicians are responsible for making sure that production runs smoothly and precisely every day—there's no room for errors or drop-outs, because there is no second take. For this exact purpose, the Digital 9000 digital masterpiece is now available after over ten years of development. The system delivers the perfection that professionals have come to expect from Sennheiser: uncompressed, digital sound transmission, free of intermodulation, with stunning purity of sound and dynamics far beyond what analog wireless transmission can offer. In television studios, the Digital 9000 is an unbeatable solution for high-end sporting events.

Digital 9000

EM 9046.
The Digital Heart of Your System.

The new EM 9046 multichannel receiver is destined to become a reference standard throughout the entire broadcasting and theater production industries. It offers up to eight digital reception channels on a bandwidth of 328 MHz in the UHF range of 470 to 798 MHz. The intuitive system controls with an icon menu give users a full overview on a large TFT display. The receiver is entirely designed to make efficient use of the spectrum, so no complex intermodulation calculations are necessary. A wide variety of connection options allow for easy integration into existing audio and IT infrastructures. Individual receiver modules can easily be exchanged for upgrades and maintenance. The Digital 9000 is definitely a future-proof investment.

SKM 9000.
A First-class Digital Microphone.

Digital transmission with the SKM 9000 offers impressive dynamics and is the ideal solution for simultaneous use with wired microphones: Free of artifacts and uncompressed, the sound fits perfectly with that of the wired microphones. Experience the clarity and precision of the SKM 9000, an unrivaled world-class wireless microphone. The SKM 9000 is compatible with evolution wireless G3 and Sennheiser 2000 series microphone heads, as well as Neumann KK 204 and KK 205 capsule heads.

SK 9000.
State-of-the-art Compact Digital Bodypack Transmitter.

This lightweight, digital bodypack transmitter is an effective companion that ensures flawless wireless sound for any application, whether on stage, in the studio or during outdoor recording, even under the most difficult conditions. Simplicity and protection against unwanted changes in the settings were a high priority during design of the user controls. The icon menu and infrared synchronization with the receiver make operation fast and efficient. As with the SKM 9000, power is supplied by replaceable environmentally friendly lithium ion rechargeable battery packs, saving thousands of batteries over the entire service life of the transmitter.

3000/5000er Series.
The Key to Perfection.

The biggest events, the most brilliant performances, the worldwide broadcast—what would they be without a perfect sound?
To render this question obsolete Sennheiser has developed the professional 3000/5000 series. A class of their own, just like the events they are made to cover.

EM 3732-II.
The Captain: The True Diversity Receiver.

The EM 3731 (single-channel) and EM3732-II (dual-channel) series are characterized by high transmission reliability, exceptional audio quality and simple operation. A switching bandwidth of up to 184 MHz, more than double that of its predecessors, combined with a range of connection options guarantees optimal flexibility for daily use. The integrated Ethernet connection means that the receivers can be linked into any network. The AES3/EBU digital audio output facilitates a direct connection to digital mixing consoles. Still available: EM 3731/3732 with 36 MHz bandwidth.

SKM 5200-II.
The Handheld Transmitter: Powerful Sound on All Channels.

Durable, reliable and user-friendly, this professional handheld transmitter is ideal for every recording and broadcasting situation. The mechanics, electronics and operating concept were designed to meet the highest requirements of live events. This is why, for example, the SKM 5200-II now offers a switching bandwidth of up to 184 MHz. Another new feature: The Low Intermodulation Mode (“LoI”) increases interference immunity, especially during multichannel operation. Programming is extremely flexible: The SKM-II 5200 has one fixed frequency bank and one variable one. All parameters are shown on a backlit LCD; they can be locked to prevent accidental adjustment, and checked within seconds. Still available: SKM 5200 with 36 MHz bandwidth.

SK 5212-II.
The Bodypack Transmitter: Small Size, Powerful Transmission.

The SK 5212-II bodypack transmitter combines reliability and versatility in a very small housing. Its compact design makes the transmitter inconspicuous and comfortable to wear. The new extended switching bandwidth of up to 184 MHz provides extra flexibility. The transmission power can be adjusted to increase the transmission duration and to adapt to regional regulations. Another new feature: The Low Intermodulation Mode (“LoI”) increases interference immunity, especially during multichannel operation. Still available: SK 5212 with 36 MHz bandwidth.

EK 3241.
The Robust Camera Receiver.

The EK 3241 has a switching bandwidth of 36 MHz and frequencies that can be tuned in steps of 5 kHz.

Mobile ENG Systems

“You have to wait for the right moment. And when it comes, everything has to be perfect.”

Unbeatable for outdoor use and interviews: Sennheiser’s mobile ENG solutions provide optimal sound, even under extremely difficult conditions. The portable transmitters and receivers from the various series are particularly user-friendly when things have to go quickly and the first take has to work. Both the bodypack receiver and the wired shotgun microphone can quickly be mounted on the camera. The clip-on microphones with compatible bodypack transmitters can be almost invisibly attached to the presenter’s or interviewee’s clothing in next to no time. You reliably generate content that can immediately be broadcast live to thrill your audience.

2000 Series.
The Fast and the Serious.

Professionals choose the 2000 series for mobile use. Its high switching bandwidth ensures interference-free transmission, even when many teams of reporters are working on the transmission site at the same time. The features read like a wish list: five usable frequency windows of up to 75 MHz, switchable RF output power, network-compatibility and optimum operation using rechargeable batteries on all components, to name just a few. The result is professional sound that's natural and detailed enough for you to focus fully on the content.

SKM 2000.
The Handheld Transmitter for Mobile Professionals.

Resilient design, powerful performance. The switchable transmission power, intuitive menu navigation, easy-to-read graphic display and external charging contacts for directly charging the optional rechargeable batteries demonstrate Sennheiser's technical expertise. The SKM 2000 is compatible with all ew capsules, including the MMK 965-1 true condenser capsule, whose wired version, e 965, has already proven to be a great success.

SK 2000.
The Bodypack Transmitter to Meet All Your Requirements.

Lightweight, but with powerful transmission: with an AF frequency response of 25 to 20,000 and a choice of three RF output power levels (four in the U.S. version), for a higher range or more channels per frequency range. The rechargeable batteries of the SK 2000 (optional) can be charged right in the unit using the external charging contacts.

EK 2000.
Receiver and Camera: Inseparable.

It's nice when you can concentrate fully on the picture because you know the sound is reliable. This camera receiver allows you to do just that. Equipped with adaptive diversity, the camera receiver ensures reliable reception. Five frequency ranges with up to 75 MHz of switching bandwidth ensure optimum flexibility.

SKP 2000.
This Plug-on Transmitter Turns Your Wired Microphone into a Wireless Champion.

Just about any wired microphone can play on Sennheiser's 2000-series team. This plug-on transmitter makes it possible. Five frequency ranges with up to 75 MHz of switching bandwidth ensure optimum flexibility. The transmitter settings on the SKP 2000 can also be synchronized quickly and easily using infrared technology. Equipped with triple switchable transmission power and phantom powering, the SKP 2000 is incredibly versatile.

The 2000 Series Wireless Monitoring. Optimal Control over Your Own Game.

No sporting event is so organized that nothing will change in the course of it: The sudden absence of an interviewee and delays in the process must be passed on to the commentators and presenters without the audience noticing. In cases like these, wireless monitoring is the most subtle and reliable means of communication.

SR 2000/SR 2050.

Stationary Control Unit: The Transmitter Keeps Track of Everything.

Rugged, reliable, and flexible—in short: professional. With the SR 2000, you can choose from 26 frequency banks with up to 32 channels. Aside from being designed as a twin transmitter, the SR 2050 is identical to the SR 2000, and like its single counterpart, it is also network-compatible. This means you can use the Ethernet connections to monitor and remotely control the SR 2050 from your PC with Sennheiser's Wireless Systems Manager software. You can also easily link other network-compatible components from other Sennheiser series.

EK 2000 IEM.

Durable Bodypack Receiver.

The wireless monitoring bodypack receiver is highly durable in two ways. The metal battery compartment cover is well-suited to the hard life in the field of broadcasting. Adaptive diversity technology has also increased transmission reliability significantly. The earphone cable serves as a second antenna, which considerably reduces the number of drop-outs.

IE 4.

Earphones for Wireless Monitor Applications.

The IE 4 reproduces an outstanding sound quality and high dynamic. It is equipped with exchangeable ear sleeves, which gives an optimum fit to different ear cannels. The results are high isolation against environmental noise as well as a very good bass response.

100 Series.
Small Team, High Success Rate.

The complete sets of the 100 series were developed especially for ENG teams who want to quickly and reliably produce content under difficult conditions with little preparation time. Having to have everything "in the can" right away means your sound recording requirements are even higher. The 100 series has the flexibility to meet all your needs, anytime and anywhere.

Set ew 135-p G3.

Handheld microphone and portable diversity receiver: for interviews and reporting.

Set ew 100-ENG G3.

Plug-on transmitter (turns any wired microphone into a wireless one), clip-on microphone, portable transmitter and receiver: for maximum flexibility and freedom.

Set ew 112-p G3.

Portable transmitter and receiver, ME 2 omni-directional clip-on microphone: for quick shoots.

Set ew 122 G3.

Portable transmitter and receiver, ME 4 clip-on microphone with cardioid pattern: for quick shoots.

Set ew 135-p G3

Set ew 100-ENG G3

Set ew 112-p G3

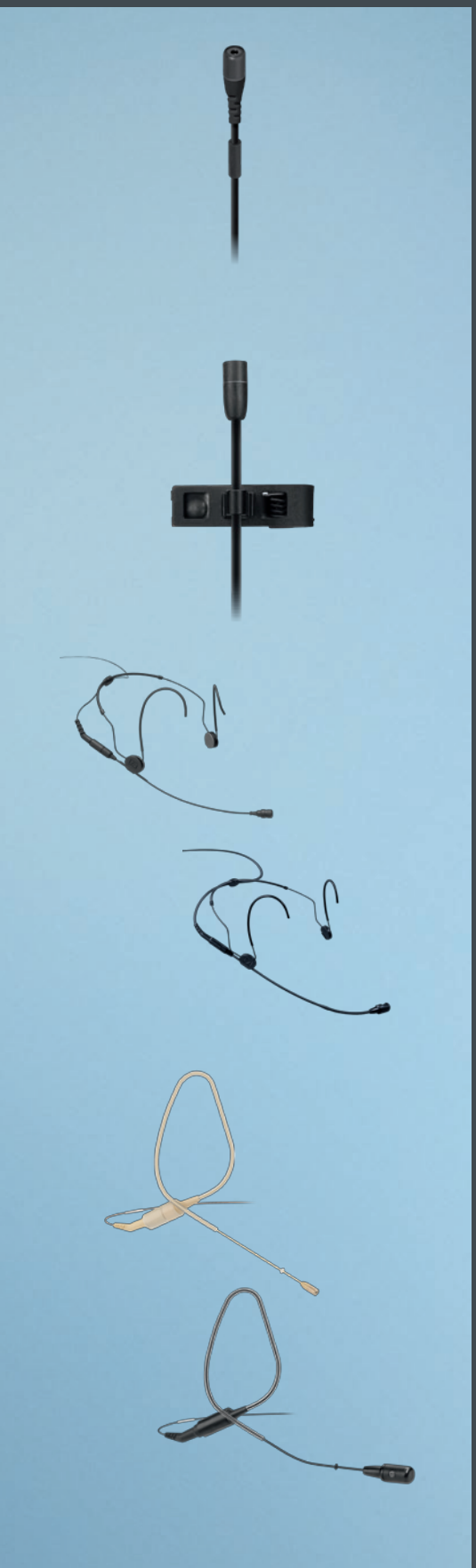
Set ew 122 G3

MKE 600.
A Reliable Member of your Team for all Outdoor Shoots.

The MKE 600 is an ideal microphone for video cameras that can take on even major filming challenges. With high directivity, it records sound from the direction of the camera and reliably filters out interference and background noise. The low-cut filter that can be switched on and off also minimizes wind noise.

Clip-On Microphones and Small Headsets

Wherever a microphone has to be almost invisible and securely fitted to the clothing our face Sennheiser clip-on microphones our small headsets are the ideal partner for demanding tasks.



MKE 1.
The Smallest Sound Professional: The Compact Clip-on Microphone.

Whether used in the studio or outdoors: The MKE 1, Sennheiser's smallest clip-on microphone, delivers its best performance exactly where a microphone must be invisible—and still offers great sound without any trade-offs. Its special gauze and an additional protective cap protect it from most moisture and mean that it only delivers what it's supposed to: perfect sound.

MKE 2.
The Classic.

The MKE 2 is a high-quality, sub-miniature clip-on lavalier microphone which is suitable for both speech and instrument miking applications in all areas of live work. It fulfils the most stringent demands on sound quality and is extremely rugged. A special Umbrella Diaphragm™ and a welded housing protect the MKE 2 against sweat and moisture.

HSP 2 / HSP 4.
The Unobstrusives.

HSP 2 (with omni-directional pick-up pattern) and HSP 4 (cardioid) are designed for professional "hands free" applications. The adjustable neckband is visually unobtrusive and very comfortable to wear.

EarSet 1 / EarSet 4.
Absolute Hands-Free and Perfect Fit.

Ear Set 1 (omni-directional) and Ear Set 4 (cardioid) feature excellent speech intelligibility and clear, pleasant trebles. They are insensitive to pop and wind noise and have a capsule diameter of only 3.3 mm.

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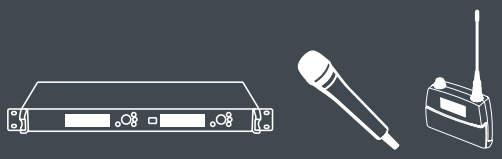

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